

KAYNARSKIY, I.S.; DEGTYAREVA, E.V.; ORLOVA, I.G.; KARAULOV, A.G.;  
GNATYUK, G.Ye.

Effect of additions of  $\gamma$ - $Al_2O_3$  on the properties of alumina  
slip, the baking, hardening in the firing process, and the  
properties of corundum products. Ogneupory 30 no.11:27-32  
'65. (MIRA 18:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

L 10288-66 EWP(e)/EWT(m)/EWP(t)/EWP(h) IJP(c) JD/WH

ACC NR.: AP5025350

SOURCE CODE: UR/0131/65/000/010/0034/0036

AUTHOR: Degtyaryeva, E. V.; Totsenko, S. B.

ORG: Ukrainian Scientific-Research Institute of Refractories (Ukrainskiy nauchno-issledovatel'skiy institut ogneporov)

TITLE: Reducing shrinkage of sintered corundum articles

SOURCE: Ognepory, no. 10, 1965, 34-36

TOPIC TAGS: corundum, alumina, porosity, powder metal sintering, insiganic opide

ABSTRACT: The porosity of samples from pure oxides, in particular from corundum, fired at relatively low temperatures could be decreased by saturation with the solutions of some salts, i. e.  $AlCl_3 \cdot 6H_2O$  or  $MgCl_2 \cdot 6H_2O$ , and a subsequent high-temperature firing. A multiple saturation of a corundum sample fired at 1200--1250 C with a solution of aluminum chloride followed by a high-temperature firing resulted in a considerable absorption of alumina and consequently in a

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UDC: 666.76.041

L 10288-66

ACC NR: AP5025350

decrease of the degree of porosity and reduction of shrinkage during sintering. Castings were made from alumina fired 6 hours at 1550 C and pulverized 4 hours by dry method in order to determine the shrinkage of corundum. A portion of the castings was made with the addition of magnesium oxide. The castings were fired 6 hours at 1200 C and were repeatedly saturated with aluminum chloride under vacuum and fired at 500 C. The results are shown in Table 1. The filling of pores

Table 1. Changes in porosity of fired alumina castings after multiple saturation with a saturated solution of aluminum chloride.

1. Contents of MgO%; 2. porosity before saturation; 3. porosity after saturation, %; 4. number of saturations; 5. none.

1 Содержание MgO, %	2 Пористость до пропитки, %	3 Пористость после пропитки, %			
		4 число пропиток			
		5	10	15	20
5 Нет	34,7	25,9	21,5	—	—
	34,1	25,3	22,3	5,5	—
	35,0	25,4	21,4	8,4	—
	22,4	20,2	20,6	16,9	13,9
	24,0	25,5	18,1	17,0	14,4
0,18	29,0	22,0	19,0	18,0	14,4
	29,6	20,0	19,2	18,0	16,2
	30,2	24,6	24,5	18,7	14,6

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L 10288-66

ACC NR: AF5025350

with aluminum oxide led to a decrease of shrinkage during sintering. The open porosity of castings saturated with aluminum chloride solution was considerably smaller after sintering than that of the ones not saturated. The results are given in Table 2. Repeated saturation with aluminum chloride of low-fired alumina

1 Добавка	2 Число про- центов	3 Суммарная усадка, %, при температуре, °C					4 Пористость после спекания, % при температуре, °C, %					5 Объемный вес (г/см³) об- разцов после спекания при температуре, °C			
		1100	1200	1300	1400	1500	1100	1200	1300	1400	1500	1200	1300	1400	1500
6 H <sub>2</sub> O	—	2,1	3,7	5,3	7,6	10,8	25,2	19,4	17,0	14,3	7,2	3,16	3,28	3,20	3,56
	5	2,0	3,5	5,0	6,0	9,2	23,2	16,6	15,9	11,7	4,9	3,16	3,30	3,50	3,72
	10	2,0	3,3	4,3	5,6	8,7	17,0	12,4	10,7	9,0	4,1	3,42	3,40	3,50	3,76
	15	1,9	3,0	3,2	4,6	8,4	14,4	10,5	10,0	7,8	2,3	3,44	3,52	3,62	3,76
MgO	—	1,8	2,4	4,2	6,5	11,2	29,6	29,0	27,6	21,6	11,4	2,90	2,90	3,22	3,60
	5	1,8	2,1	4,4	5,9	8,0	26,8	22,2	20,6	11,8	4,3	3,05	3,28	3,60	3,74
	10	1,5	2,0	3,3	4,5	6,8	25,4	21,2	18,0	9,8	3,0	1,18	3,35	3,67	3,84
	15	0,9	1,9	2,8	3,0	6,9	20,4	18,2	16,0	10,5	2,7	3,25	3,36	3,62	3,84

Table 2. Influence of the saturation of corundum

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L 10288-66

ACC NR: AP5025350

castings with aluminum chloride solution on the shrinking, change in porosity, and volumetric weight after a 6-hour sintering.

1. Addition; 2. number of saturations; 3. total shrinkage at °C; 4. porosity after sintering, %, at °C, %; 5. volumetr. weight g/cm<sup>3</sup> after sintering, °C; 6. none.

castings gave a considerable reduction of shrinkage after sintering. With the addition of magnesium oxide to alumina, the volumetric weight of castings after sintering at 1500 °C was very high. If there is need to produce corundum articles with high volumetric weight, saturation is unsuitable because it reduces the degree of porosity. Orig. art. has: 3 tables.

SUB CODE: #,13 / SUBM DATE: (X)/-

NR REF SOV: 002/ OTHER: 001

PC

Card 4/4

DEGTYAREVA, E.V.; TOTSENKO, S.B.

Reducing shrinkage in the firing of corundum products. Ogneupory  
30 no.10:34-35 '65. (MIRA 18:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

L 15400-66 EWP(e)/EWI(m)/EWP(b) WH

ACC NR: AP5027227

SOURCE CODE: UR/0020/65/164/006/1283/1285

AUTHOR: Kaynarskiy, I. S.; Orlova, I. G.; Degtyareva, E. V.

ORG: Ukrainian Scientific-Research Institute of Refractory Materials (Ukrainskiy nauchno-issledovatel'skiy institut ogneporov)

TITLE: The interdependence between shrinkage and deformation during the sintering of corundum

SOURCE: AN SSSR. Doklady, v. 164, no. 6, 1965, 1283-1285

TOPIC TAGS: corundum refractory, sintering, material deformation

ABSTRACT: The sintering of metal powders proceeds by means of diffusion creep or "viscous" flow caused by the action of capillary forces across the surfaces of the internal pores of the material. The present investigation established that shrinkage and deformation (due to gravitational pull) during the sintering of corundum samples proceed according to a pattern which confirms the diffusion mechanism of these processes. Basic results are summarized in Figures 1 through 4 of the article.

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UDC: 536.421.5+539.37: 666.76

L 15400-66

ACC NR: AP5027227

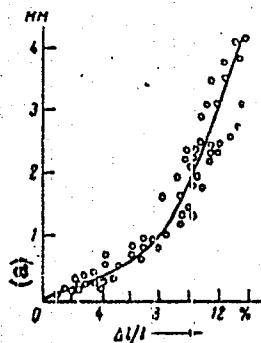


Fig. 1 Linear shrinkage versus deformation of corundum samples during isothermal sintering for 6 hr at 1200 — 1500C.  $\Delta l/l$  - deformation, mm.

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L 15400-65

ACC NR: AP5027227

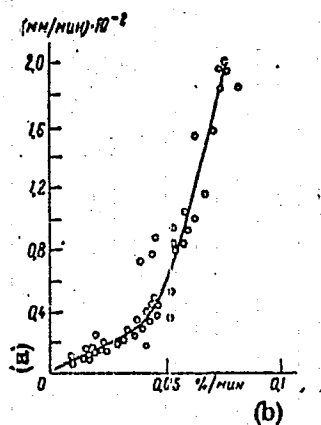


Fig. 2 Initial shrinkage rate versus the deformation of corundum samples during isothermal sintering at 1200 — 1500C. a - initial deformation rate; b - initial shrinkage rate.

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L 15400-66

ACC NR: AP5027227

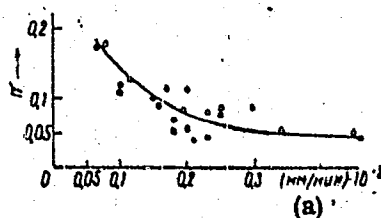


Fig. 3 Shrinkage rate versus a constant deformation rate during the second phase of isothermal heating at 1500C.  $a$  - constant deformation rate,  $(\text{mm/min}) \cdot 10^{-2}$

Cord 4/5

I 15400-66

ACC NR: AP502T227

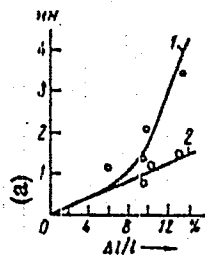


Fig. 4 Shrinkage versus deformation during isothermal sintering of corundum nonequilibrated samples (1) and those brought closer to equilibrium by preliminary annealing (2).  
a -- deformation

The paper was presented by Academician N. V. Belov, 27 Feb 65. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11 / SUBM DATE: 25Feb64 / ORIG REF: 004 / OTH REF: 001

BC

Card 5/5

L 22646-66 EWT(e)/EWT(m)/T/EWP(t)/EWP(k) JD/WH

ACC NR: AP6008690

SOURCE CODE: UR/0131/65/000/011/0027/0032

AUTHOR: KaynarSKIY, I. S.; Degtyareva, E. V.; Orlova, I. G.; Karaulov, A. G.;  
Gnatyuk, G. Ye. 47 46 13

ORG: Ukrainian Scientific Research Institute of Refractories (Ukrainskiy nauchno-  
issledovatel'skiy institut ogneporov)

TITLE: The effect of gamma-Al<sub>2</sub>O<sub>3</sub> admixture on the properties of alumina slips, sin-  
tering, hardening in annealing, and properties of corundum products 13 14

SOURCE: Ogneporoy, no. 11, 1965, 27-32

TOPIC TAGS: alumina, corundum, aluminum oxide, corundum ceramic

ABSTRACT: The effect of  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> on various properties of slips, on the behavior of  
castings during annealing, and on the properties of sintered products was studied. The  
introduction of  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> increases the zeta-potential. Recrystallization of active  $\gamma$ -  
Al<sub>2</sub>O<sub>3</sub> at low temperatures followed by conversion of  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> to  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> causes a sub-  
stantial increase in the strength of the castings in the heated state in the 600-1300°C  
range as compared to strength of castings without  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>. The latter decreases the  
size of corundum crystals in the sintered body, and this raises the strength of corun-  
dum ceramics to which MgO had not been added. Shrinkage in castings containing  $\gamma$ -  
Al<sub>2</sub>O<sub>3</sub> becomes more pronounced during annealing and an anisotropy of shrinkage is ob-

UDC: 666.76.022.38

Cord 1/2

L 22616-66

ACC NR: AP6008690

served. Addition of  $\gamma\text{-Al}_2\text{O}_3$  slows down the sintering at about  $1500^\circ\text{C}$ ; at higher temperatures, the degree of sintering of the castings is only slightly less. Introduction of  $\gamma\text{-Al}_2\text{O}_3$  reduces the distortion of alumina castings up to  $1450\text{-}1470^\circ\text{C}$  but increases it at higher temperatures. The main advantage of  $\gamma\text{-Al}_2\text{O}_3$  is that no binder (such as sucrose, flour, etc.) is needed in the slip, and a considerable strengthening of the heated raw material is obtained. It is desirable to use the  $\gamma\text{-Al}_2\text{O}_3$  admixture together with  $\text{MgO}$ ; the latter causes a substantial reduction of open porosity and an increase in the strength of the ceramic. Orig. art. has: 14 figures, 2 tables.

SUB CODE: 11/

SUBM DATE: 00/

ORIG REF: 008/

OTH REF: 000

Card 2/2 *HW*

L 07417-67 EWP(e)/EWT(m) WH  
 ACC NR: AF6030779 (A) SOURCE CODE: UR/0363/66/002/009/1671/1677  
 AUTHOR: Totsenko, S. B.; Kaynarskiy, I. S.; Degtyareva, E. V. 449  
 ORG: Ukrainian Scientific Research Institute of Refractories (Ukrainskiy nauchno-issledovatel'skiy institut ogneporov) B  
 TITLE: Properties of sintered spinel and spinel-corundum refractories 15  
 SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 9, 1966, 1671-1677  
 TOPIC TAGS: refractory, ceramic product property, dielectric breakdown, corundum  
 REFRACTORY, SINTERING, ELECTRIC RESISTANCE  
 ABSTRACT: The effect of the temperature of synthesis of magnesia<sup>1</sup> spinel on the sintering of spinel and spinel-corundum specimens during firing and on the properties of the sintered body was studied. A lowering of the temperature of synthesis of the spinel causes the formation of products of higher density, which increases their breakdown voltage. Introduction of corundum into spinel considerably decreases the breakdown voltage of the articles, but increases their electrical resistance, cold and hot strength, and the modulus of normal elasticity. The strength and modulus of normal elasticity of spinel and spinel-corundum articles are largely determined by the size of the crystals of the ceramic body, and are related to it by the equations  $\sigma_{\text{bend}} = 1250 \times d^{-0.20}$ ,  $E = 1.3 \times 10^6 d^{-0.23}$ , where d is the crystal size. Introduction of up to 5% forsterite into the spinel or spinel-corundum ceramic causes a considerable increase in their breakdown voltage and compressive strength and a very slight

Card 1/2 UDC: 666.76

L 07417-67

ACC NR: AP6030779

decrease of refractoriness. A larger admixture of forsterite increases the breakdown voltage somewhat, but decreases the strength of the ceramic body. The addition of 5% forsterite markedly improves the thermal stability of the specimens. Orig. art. has: 14 figures.

SUB CODE: 11/ SUBM DATE: 25Oct65/ ORIG REF: 015/ OTH REF: 003

Card 2/2 *pla*

ACC NR: AP6033371

(A)

SOURCE CODE: UR/0131/66/000/008/0047/0056

AUTHOR: Degtyareva, E. V.; Kaynarshiy, I. S.; Totchenko, S. B.

ORG: Ukrainian Scientific Research Institute of Refractory Materials (Ukrainskiy nauchno-issledovatel'skiy institut ognenporov)

TITLE: Studying sintering and recrystallization of magnesian spinel and its alumina mixtures

SOURCE: Ogneporov, no. 8, 1966, 47-56

TOPIC TAGS: sintering, recrystallization, magnesium compound, aluminum compound, porosity

ABSTRACT: The authors study sintering of magnesian spinel synthesized at various temperatures, as well as spinel-corundum and spinel- $\gamma$ - $Al_2O_3$ . Both  $\alpha$ - and  $\gamma$ -alumina and spinel roasted at 1200 and 1750°C are used for studying sintering of materials with various activity, where this activity determines solid phase interaction rate and degree of sintering. All of these materials were modified in various ways for the study. The results of the study show that sintering of spinel which was synthesized at 1750°C begins at 1200°C and proceeds uniformly at higher temperatures. The sintering of spinel synthesized at 1200°C begins at 1500°C but takes place on a more intensive scale at higher temperatures than spinel synthesized at 1750°C. Spinel sinter-

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UDC: 666.76.001.5



ACC NR AP6033371

ing kinetics are proportional to  $\sqrt{t}$  with respect to elimination of open porosity and to  $\sqrt[3]{t}$  with respect to the elimination of closed porosity without regard to preliminary sintering temperature or specimen forming method. The addition of 3% alumina to spinel improves spinel sintering independently of the activity of the original material. This is explained by the formation of excess vacancies and the process is likened to the addition of spinel to alumina which also results in improved alumina sintering. A sharp increase in impurities has adverse effects on sintering. Sintering is at its minimum in mixtures composed of 70% spinel and 30% alumina. Variation in the degree of mixture sintering, where the mixture contains more than 30% alumina, is proportional to the molecular content of the free alumina in the mixture regardless of the activity of the original components. Spinel-alumina mixture sintering is considerably dependent on the activity of the original components and formation of raw materials. Low temperature spinel synthesis and pressing decreases the degree of sintering of spinel-alumina mixtures. Magnesian spinel crystals grow rapidly when the open porosity of the specimens is less than 5-6%. Increasing the rate of spinel crystal growing improves their closed porosity. The growth of spinel crystals can be significantly increased by adding 30% corundum. On the other hand, when corundum content is above 30% in the mixture, the system becomes two-phased and the growth of spinel crystals is retarded. Orig. art. has: 12 figures, 6 tables.

SUB CODE: 11, 20/ SUBM DATE: None/ ORIG. REF: 032/ GEN REF: 008

Card 2/2

~~DEPT. OF AGRICULTURE~~

Speed up the introduction of new laboratory equipment. Muk.-elev.  
prom. 20 no.12:28 D '54. (MIRA 8:3)

1. Krasnodarskaya krayevaya kontora Zagotzerno.  
(Laboratories--Apparatus and supplies) (Grain--Grading)

DEGTYAREVA. G.

~~DEGTYAREVA. G.~~

Method for determining sunflower quality. Muk.-elev.prom. 21  
no.2:30-31 F '55. (MLRA 8:3)

1. Krasnodarskaya kontora Zagotzerno.  
(Sunflowers)

DEOTYAREVA, G.

~~XXXXXXXXXX~~  
Device for making a daily average corn sample. Muk.-elev.prom. 23  
no.1:21 Ja '57. (MLRA 10:5)

1.Krasnodarskaya kontora Rosglavserno.  
(Corn (Maize)--Analysis)

L 33524-65 EWG(j)/EPA(s)-2/EWP(e)/EWT(m)/EWF(c)/EWF(n)-2/EWA(d)/EPR/EPA(w)-2/  
EWP(t)/EPA(bb)-2/EWF(b) Pr-4/Ps-4/Pt-10/Ps-4/Pal-10 IJP(c) WW/MJW/JD/WE/NH  
ACCESSION NR: AR5005705 S/0276/64/000/010/B081/B081

SOURCE: Ref. zh. Tekhnol. mashinostr. Sv. t., Abs. 10B549

AUTHOR: Shreyder, A.V.; Deytyareva, G.D.

TITLE: Corrosion of magnalium at high temperatures and the protective effect of an anodic oxide coating

CITED SOURCE: Tr. Gos. n. i proyekt. in-t neft. mashinostr., vyp. 2, 1964, 83-90

TOPIC TAGS: magnalium, high temperature corrosion, anodic oxidation, oxide protective property

TRANSLATION: The results of corrosion resistance tests on anodized samples of magnalium (alloy AMg5 with 4.8% Mg) are presented. It was shown that high temperature corrosion of magnalium in air represents a process attenuating in time up to 450C, inclusive. When heated in air, anodic oxide coatings are subject to dehydration and cracking as a result of successively occurring structural conversions; i.e. hydrargillite (bayerite) to boehmite, to leached boehmite, to amorphous alumina to crystalline  $Al_2O_3$ . The ability of an anodic oxide coating to protect against atmospheric corrosion at normal temperatures deteriorates increasingly as temperature and exposure period are

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L 33524-65

ACCESSION NR: AR#005705

increased when anodized magnalium is heated in air. Fissures resulting from dehydration and cracking of anodic oxide films are "healed" by high temperature oxidation taking place when the material is heated in air. Anodic oxide coatings maintain their protective properties against high temperature oxidation up to the melting point for magnalium.

SUB CODE: MM

ENCL: 00

Card 2/2

L 32921-66 EWT(1) SCTB DD

ACC NR: AP6018131

SOURCE CODE: UR/0239/66/052/006/0741/0744

AUTHOR: Chenykeyeva, Ye. Yu.; Degtyareva, G. F.

ORG: Institute of Evolutionary Physiology and Biochemistry im. I. M. Sechenov, AN SSSR, Leningrad (Institut evolyutsionnoy fiziologii i biokhimii AN SSSR)

TITLE: Tissue adaptation to chronic hypoxia over a series of generations

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 52, no. 6, 1966, 741-744

TOPIC TAGS: animal experiment, hypoxia, brain tissue, tissue physiology, enzyme, biochemistry

ABSTRACT: Succinate dehydrogenase and cytochrome-c-oxidase enzyme activity of the brain was investigated in hypoxia-acclimatized rats of the 13th to 17th generations and compared with results of earlier studies (1st to 12th generations) to determine whether acclimatization gradually produces changes in tissue biochemical processes. Cytochrome-c-oxidase levels (micromols of cytochrome-c oxidized in 1 hr per mg of tissue) of the cerebral hemispheres and the medulla oblongata of experimental and control animals were measured by Pope's method using an SF-4

UDC: 612.015.3

Card 1/2

L 32921-66

ACC NR: AP6018131

spectrophotometer, and the succinate dehydrogenase level of these tissues was measured by Wattenburg and Leong's method (not described). Findings show that contrary to earlier results for the 1st to 12th generations, a statistically reliable increase in cytochrome-c-oxidase activity is found in the medulla oblongata, but the slight increase found in the cerebral hemispheres is not statistically reliable. Succinate dehydrogenase activity of experimental animals does not differ from the levels of control animals or the 1st to 12th generations. The authors conclude that in the prolonged process of hypoxia acclimatization over a series of generations, the tissue biochemical systems undergo changes, particularly of the electron transfer system in the oxidation process. Possibly succinate dehydrogenase activity of the brain will also reflect a change in later generations. Orig. art. has: 2 tables. [06]

SUB CODE: 06/ SUBM DATE: 21Dec64/ ORIG REF: 006/ OTH REF: 004/  
ATD PRESS: 5027

Card



SHREYDER, Aleksandr Viktorovich, kand. tekhn.nauk; DEGTYAREVA, Galina  
L'vovna; SHLUGER, M.A., red.; NAUMOV, I.D., nauchnyy red.;  
VASIL'YEVA, F.A., ved. red.; LADONINA, L.V., tekhn. red.

[Corrosion resistance of aluminum and the use of aluminum in  
various branches of industry; review of practices in foreign  
countries] Korroziionnaya stoikost' aliuminiia i ego primene-  
nie v razlichnykh otraslakh promyshlennosti; obzor zarubezh-  
noi tekhniki. Moskva, Gos.nauchno-issl. in-t nauchn. i tekhn.  
informatsii, 1962. 62 p. (MIRA 16:4)

(Aluminum—Corrosion)

S/080/62/035/002/021/022  
D204/D302

18.115)  
AUTHORS: Shreyder, A. V. and Degtareva, G. I.

TITLE: Relationship between heat resistance and velocity constants of the oxidation reactions of chrome and chrome-nickel steels

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 2, 1962. 455-458

TEXT: Oxidation of 15 steels (compositions tabulated) was studied at  $900 \pm 5^\circ\text{C}$ , over 100, 200, 300, 400, 500, 700 and 1000 hours in air. Extent of reaction was assessed by the weight-gain method. The oxidized layers were stripped off electrolytically, in a melt of 60% NaOH/40%  $\text{Na}_2\text{CO}_3$ , at  $350 - 400^\circ\text{C}$ , using current densities of  $40 - 50 \text{ A/dm}^2$ , over 5 - 15 minutes. The results are shown graphically. It was found that steels 1X18H9T, X23H13, X25T, X18H11C2A, X18H11C2P3A and X18H11C2P2A (1Kh18N9T, Kh23N13, Kh25T, Kh18N11S2A, Kh18N11S2G3A and Kh18N11S2G2A) oxidized parabolically whilst steels X23H11, X25H20C2, X25H05, X20H14C2, X25H16P7AP, X25H16P7C2AP, Card 1/2

Relationship between heat ...

S/080/62/035/002/021/022  
D204/D302

X25H16G7C3AP and X23H13C2A (Kh23N11, Kh25N20S2, Kh25Yu5, Kh20N14S2, Kh25N16G7AR, Kh25N16G7S2AR, Kh25N16G7S3AR and Kh23N13-S2A) followed alogarithmic law. The appropriate equations are given and the constants are tabulated. Dependences of the velocity constants on the character and concentration of the alloying components (Si, Mn, Al) are discussed in brief, but no general conclusions are drawn except that the rates of oxidation of the above steels are markedly affected by the composition. Kh. I. Cheskis took part in the experimental part of this work and in the selection of materials to be tested. There are 2 figures, 1 table and 2 Soviet-bloc references.

SUBMITTED: January 23, 1961

Card 2/2

L 17905-63	ENP(q)/EWT(m)/BDS	AFTC	ID/WR
ACCESSION NR: AP3003767	3/0080/63/036/006/1254/1258		
AUTHORS: <u>Shreyder, A. V.; Degtyareva, G. L.; Sukhacheva, E. V.</u>			
TITLE: <u>Oxidation of magnalium with water at elevated temperatures and pressures</u>			
SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 6, 1963, 1254-1258			
TOPIC TAGS: magnalium, triethanolamine, corrosion-protective property			
ABSTRACT: Oxidation of magnalium with distilled water forms protective films on the magnalium. Evaluation by the drop method shows the index of protection to be 2 times less than that of films formed by anodic oxidation. Films of maximum protection are formed in distilled water by soaking for 5 hours at 100F, 2 hours at 150F or 1 hour at 200F. Boiling for 10 minutes in a 3% waterglass solution forms protective films 1.5-2 times better than those formed by soaking in water at 150F or 200F. Introduction of triethanolamine in the water increases the thickness of the film by 1.5-2 times but the film has lowered corrosion-protective properties. Orig. art. has: 3 tables.			
Card	1/2		

L 17905-63

ACCESSION NR: AP3003767

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
neftyanogo mashinostroyeniya (State Scientific-Research and Design Institute  
for petroleum Machinery)

SUBMITTED: 19Mar62

DATE ACQ: 07Aug63

ENCL: 00

SUB CODE: ML

NO REF SOV: 004

OTHER: 001

Cord

2/2

L 24681-65 EWT(m)/EWA(d)/EPR/EWP(t)/EWP(b) Ps-L IJP(c) JD/WB  
ACCESSION NR: AR5000986 S/0282/64/000/010/0002/0002

SOURCE: Ref. zh. Khimicheskoy i kholodil'noye mashinostroyeniye. Otd. vyp.,  
Abs. 10.47.18

AUTHOR: Shreyder, A. V.; Degtyareva, G. L.; Sukhacheva, S. V.

TITLE: Oxidation of magnalium by water at high pressures and temperatures

CITED SOURCE: Tr. Gos. n.-i. i proyekt. in-t. neft. mashinostr., vyp. 2,  
1964, 67-72

TOPIC TAGS: magnalium piping, anticorrosion oxidation, condensation piping,  
water supply piping, distilled water oxidation, protective film index, piping  
oxidation technique, pipeline corrosion, aluminum alloy corrosion

TRANSLATION: Piping for water supply and condensation cooling equipment used in  
many manufacturing processes of the oil refining, petrochemical and other  
branches of industry is made of magnalium in view of the alloy's high corrosion  
stability and technological qualities. Magnalium piping is nonetheless subject to  
some corrosion after a given period of exposure and the attack is intensified  
when the recirculating cooling water contains impurities. The protection of the  
Card 1/2

L 24683-65  
ACCESSION NR: AR5000966

internal surfaces of such piping by electrochemical oxidation is costly and technically complex. Hence, the possibility of depositing protective films on Al and its alloys by treating them in water at high pressure and temperature is of interest. Tests served to establish that distilled water oxidation can be employed to obtain protective films on magnalium. The protective quality index of such films, evaluated by spot test methods, was 50% lower than the index of films deposited by standard anodic oxidation. Films with peak protective qualities can be deposited on magnalium in distilled water by exposure for 5 hrs. at 100C, 2 hrs. at 150C or 1 hr. at 200C. Filling by boiling for 10 min. in a 3% solution of water-glass improves by 50 - 100% the protective quality indices of films deposited by exposures of not less than 2 hrs. at 150C or 1 hr. at 200C. The thickness of the forming oxide film can be increased 50 - 100% by adding triethanolamine to the water, but the corrosion-inhibiting qualities of the film deteriorate at the same time. Bibl. with 6 titles.

SUB CODE: PM, FP

ENCL: 00

Card 2/2

DEGTYAREVA, L.G.; MIKHEL'SON, V.A.

Experience in using in the clinic the Soviet muscle relaxant  
kvalidil. Eksper. khir. i anest. 9 no.6:88-91 N-D '64.

(MIRA 18:7)

1. Fakul'tetskaya khirurgicheskaya klinika (zav. - prof. I.S.  
Zhorov) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo  
ordena Lenina meditsinskogo instituta im. I.M.Sechenova.



5(1)

AUTHORS:

Shevlyakov, A. S., Etlis, V. S., SOV/20-122-6-34/49  
Minsker, K. S., ~~Dagtyareva, L. M.~~, Fedoseyeva, G. T.,  
Kucherenko, M. M.

TITLE:

Preparation of Isotactic Polystyrene (Polucheniye  
izotakticheskogo polistirola)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 6,  
pp 1076-1078 (USSR)

ABSTRACT:

In spite of several papers (Refs 1-3) the preparation method and the parameter of isotactic polystyrene are not described in publications. The present paper tries to determine the conditions of stereospecific styrene polymerization which are suited for technological development. The styrene polymerization was produced with a catalytic system of triethyl aluminium titanium trichloride in the medium of saturated hydrocarbons at 30-120° in a nitrogen atmosphere. A dependence of the polymerization velocity and the yield of isotactic fraction of the polymer on the concentration of  $Al(C_2H_5)_3$  in the solvent (benzine) was found (Table 1). Figure 1 shows the dependence of the yield of the isotactic fraction (fraction III.), of the per cent content of the

Card 1/3

## Production of Isotactic Polystyrene

SOV/20-122-6-34/49

amorphous fraction in the polymer (1st fraction), of the characteristic viscosity (in cyclohexanone at 20°) and of the density ( $\rho$ ) on the quantity K. Figure 2 shows the yield of the isotactic and amorphous fraction in the polymer in dependence on temperature. An increase in the entire yield of polystyrene takes place only in consequence of an increase in the yield of the amorphous fraction. When the relation  $C_8H_8 : TiCl_3$  was raised from 10 to 15, the content of the amorphous fraction in the polymer increased by 1.5-2.0 times. The yield of the isotactic fraction per  $TiCl_3$ -unit practically did not change. The results of typical tests are collected in table 2. Obviously the formation of the amorphous product is not connected with surface effects and takes place in a homogeneous solution according to the ion mechanism. The constant yield of an isotactic product, however, must be explained by the constant size of the active surface of the catalyst. Polystyrene can be prepared according to the system described, depending on the conditions of the procedure and the polymerization method either as a completely crystalline substance (98.5-100 %) or with a considerable content of the

Card 2/3

Production of Isotactic Polystyrene

SOV/20-122-6-34/49

amorphous fraction. Figure 3 shows typical thermodynamic curves (plotted with Kargin's scales) of an industrial sample, of the polymer **prepared** according to the catalytic system mentioned above, and of its individual fractions. Figure 4 gives the radiographs of both fractions. Table 3 shows some physico-mechanic and electric properties of the polystyrene under consideration. V. A. Kargin, Member, Academy of Sciences, USSR assisted the author in his work. There are 3 figures, 3 tables, and 3 references.

PRESENTED: June 27, 1958, by V. A. Kargin, Academician

SUBMITTED: June 26, 1958

Card 3/3

S/064/60/000/005/003/009  
B015/B058

AUTHORS: Shevlyakov, A. S., Etlis, V. S., Minsker, K. S.,  
Degtyareva, L. M., Fedoseyeva, G. T., Kucherenko, M. M.

TITLE: Stereospecific Polymerization of Styrene ^

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 5, pp. 10 - 15


TEXT: In the paper under review, details on the stereospecific polymerization of styrene are discussed and experimental results are mentioned in connection with a previous report (Ref. 11) on the production of isotactic polystyrene by means of a catalytic system consisting of triethyl aluminum and  $TiCl_3$ . The  $\alpha$ -form of  $TiCl_3$ , showing a high stereospecificity, was used in the experiments. It was established that the yield of styrene isomers (of the amorphous and isotactic fractions) depends on the dilution of the reaction mixture (Table 1) and work was conducted with a concentration of from 7 to 10% triethyl aluminum. Reducing the relative amount of triethyl aluminum impairs the stereospecificity and increases the yield of the amorphous product. An increase

Card 1/2

## Stereospecific Polymerization of Styrene

S/064/60/000/005/003/009  
B015/B058

of the molar ratio of triethyl aluminum to  $\text{TiCl}_3$  above 1 : 1 at a concentration of the former of 7% and an experimental temperature of  $90^\circ$  and  $120^\circ\text{C}$  leads to increased formation of amorphous fraction, but it does not change the yield of isotactic fraction (Table 2). Temperature (with variations of from  $60^\circ$  to  $150^\circ\text{C}$ ) exerted a marked influence on the yield of amorphous fraction, but not on that of the isotactic fraction. The following polymerization conditions are recommended: concentration of triethyl aluminum in the solution: 5.0-7.0%, molar ratio between triethyl aluminum and  $\text{TiCl}_3$  = 1 : 1, weight ratio between styrene and  $\text{TiCl}_3$  = 12-20 : 1, reaction temperature  $90$ - $150^\circ\text{C}$ , duration of reaction 3-5 hours. The properties of polystyrene obtained in the stereospecific synthesis are finally discussed and the advantages of the crystalline product (Table 3) are pointed out. There are 3 figures, 3 tables, and 20 references: 6 Soviet, 5 US, 2 British, 2 German, 4 Italian, and 1 Japanese.



Card 2/2

ETLIS, V.S.; DEGTYAREVA, L.M.; RAZUVAYEV, G.A.

Reaction of selenious anhydride with oxides of certain alkenes.  
Zhur.ob.khim. 32 no.5:1508-1511 My '62. (MIRA 15:5)  
(Selenium oxide) (Oxides)

DEGTYAREVA, I. P.

Effect of cultivation practices on the amount of mobile forms of  
humus in the soil. Trudy Inst.pochv.i agrokhim.AN Azerb.SSR 7:153-  
160 '55.

(MLBA 9:12)

(Nagorno-Karabakh Autonomous Province--Humus)

DEGTYAREVA, L.P.

Humus composition in mountain-meadow and mountain-meadow-steppe  
soils of Kedabek District, Azerbaijan S.S.R. Izv. AN Azerb. SSR.  
Ser. biol. i med. nauk no.6:127-137 '60. (MIRA 14:9)  
(KEDABEK DISTRICT--HUMUS)



DEGTYAREVA, L.P.

Composition of humus in mountain Chernozem soils and their  
eroded varieties in the Lesser Caucasus. Trudy Sekt. eroz.  
AN Azerb. SSR 1:96-106 '61. (MIRA 15:8)  
(Azerbaijan--Erosion) (Azerbaijan--Chernozem soils)

DEGTYAREVA, M. G.

37620

toksichnost' perazimovavshego pod sivegom verna. sbornik rabot  
po voprosam gigieni pitaniya. novosibirsk, 1949, s. 80-93 bibliogr: 8 nazv.

SO: Letopis' Zhurnal' nykh Statey, Vo. 37, 1949

DEGTYAREVA, M.G.

Effect of irrigation and mineral fertilizers on the distribution and  
nitrogen fixing activeness of azotobacter in Chestnut soils of the  
Kulunda Steppe. Trudy Biol. inst. Sib. otd. AN SSSR no.4:61-67 '59.  
(MIRA 13:10)

(Kulunda Steppe—Azotobacter)

DEGTYAREVA, M. M.

Megaloblastosis. Probl. gemat. i perel. krovi no.4:17-21 '62.  
(MIRA 15:4)

1. Iz kafedry gosptal'noy terapii (sav. - prof. A. A. Demin)  
Novosibirskogo meditsinskogo instituta (dir. - prof. G. D.  
Zalesskiy).

(ERYTHROCYTES)

DEGTYAREVA, M.M.

Thrombocytopoiesis in myeloproliferative diseases. Problemy  
gemat. i perel. krovi 8 no.8:30-36 Ag '63. (MIRA 17:8)

1. Iz kafedry gosspital'noy terapii (zav. - prof. A.A. Demin)  
Novosibirskogo meditsinskogo instituta i 3-y kafedry terapii  
(zav. - chlen-korrespondent AMN SSSR prof. I.A. Kassirskiy)  
TSentral'nogo instituta usovershenstvovaniya vrachey.

DECTYAREVA, M. P.. Cand. Physicomath Sci.

"Principles Governing the Theory of Analytical Functions in  
Linear Noncommutative Algebra." Sub 16 Apr 47, Moscow Order of  
Lenin State U imeni M. V. Lomonosov.

Dissertations presented for degrees in science and engineering  
in Moscow in 1947.

SO: Sum. No. 457, 18 Apr 55

~~DEGT~~AREVA, N. A.

USSR / Pharmacology, Toxicology. Chemotherapeutic V  
Agents, Antibiotics.

Abs Jour: Ref Zhur-Biol., No 18, 1958, 85239.

Author : Khaymovskiy, D.I., Lapteva, Ye.A., ~~Dagtyareva, N.A.~~

Inst : Uzbekistan Scientific Research Institute of Dermatology and Venereology.

Title : Permeability of Blood Capillaries in Patients with Syphilis Before and After Treatment with Ekmonovocillin, Novarsenol, and Biloquinol.

Orig Pub: Sb. tr. Uzbekist. n.-i. koshno-venerol. in-ta. 1957, Vol 6, 317-320.

Abstract: In 50 of 68 patients (18-50 years of age) with primary and secondary active syphilis, there was increased capillary permeability prior to treatment. Combined treatment with ekmonovocillin, novarsenol, and biloquinol led to normalization or reduction

Card 1/2

USSR / Pharmacology, Toxicology. Chemotherapeutic V  
Agents, Antibiotics.

Abs Jour: Ref Zhur-Biol., No 18, 1958, 85239.

Abstract: of permeability of the capillaries in many patients,  
and to normalization or improvement of the plasma  
protein formula in many of them. From the author's  
summary.

Card 2/2

55



CATEGORY : Cultivated Plants. Industrial. Oleiferous. M  
 Sugar.  
 ABS. JOUR. : RZhBiol., No. 3, 1959, No. 11973  
 AUTHOR : Bugay, S. M., Degtyarova, N. I.  
 INST. : Uman Agricultural Institute.  
 TITLE : Growing "Makhorka" (Nicotiana rustica) by the Square-Hill  
 Method.  
 ORIG. PUB. : Tabak, 1958, No. 1, 51-53  
 ABSTRACT : Data of Uman Agricultural Institute experiments (1954-  
 1956) in the study of the growth and development charac-  
 teristics of "makhorka" (Nicotiana rustica) with differ-  
 ent methods of spacing the plants. With the hill and  
 drill placement of "makhorka" (Nicotiana rustica), the  
 yield is in direct proportion to the density of the plant  
 stand. With equal density of the stand (55.5 thousand on  
 1 hectare), the growth and development of "makhorka" are  
 completely identical in the case of the drill and square-  
 hill placement at the rate of 2 plants to a hill. Under

CARD: 1/2

KOVALENKO, P.N.; DEGTYAREVA, N.I.

Polarographic determination of the start of the precipitation of a basic salt of antimony (V) in a hydrochloric acid solution, and calculation of the solubility product of this salt. Zhur.neorg.khim. 5 no.6:1189-1195 Je '60. (MIRA 13:7)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.  
(Antimony chloride)  
(Reduction, Electrolytic)

DEGIYAKOVA, IV. V.

✓ **Laxative effects of phenolphthalein and carbocholine in star-bearing animals under the conditions of hedge breeding.** MD. P. E. Radovich and N. V. Degtyareva. *Trudy Mosh. Pashn. Melkhozov. Inst.* 4, 113-116 (1953); *Russol. Zhur. Khim.* 1954, No. 41649.—Laxative effect of phenolphthalein (I) and carbocholine has been studied on minks, polar foxes, and foxes. Both compds. showed the effect. The effect of I was greater in the case of polar foxes than in minks and foxes. Therapeutic doses of both compds. have been found for each kind of the animals. B. Wierbicki

①

DEGTYAREVA, N. V.

MD ✓ Xerolorm, bismuth nitrate, and aluminate doses for silver-black and polar foxes. P. B. Radkevich and N. V. Degtyareva. *Korobnyukovo i Zverovodstvo* 1954, No. 3, 54-55. *Istoria. Zhur. Khim. Biol. Khim.* 1955, No. 7233. Xerolorm and  $\text{Bi}(\text{NO}_3)_3$  (4.0-6.0 g.) constitute threshold toxic doses to silver-black and polar foxes causing primarily intestinal disturbances. B. S. Levine.

①

ZEMSKOV, P.I., kand.tekhn.nauk; KHAVINA, R.B., inzh.; DEGTAREVA, O.F., inzh.;  
YAKUSHINA, Ye.N., inzh.; KHARCHENKO, Ye.N., inzh.; ANISHCHENKO, V.V.,  
inzh.

Capron pinions for motor-vehicle engines. Mashinostroenie  
no.6:42-44 N-D '65. (MIRA 18:12)

ZEMSKOV, P.I., dotsent; YAKUSHINA, Ye.N., inzh.; KHARCHENKO, Ye.N., inzh.;  
KHAVINA, R.B., inzh.; DEGTYAREVA, O.F., inzh.

Cermet piston rings. Izv. vys. ucheb. zav.; mashinostr. no. 10:  
123-128 '65 (MIRA 19:1)

1. Submitted April 17, 1964.

DEGTYAREVA, O.F., OSTROVSKAYA, M.F.

Spectral analysis of gold purity. Zav.lab. 26 no.5:564-566 '60.  
(Gold--Spectra) (Metals--Spectra)

DEGTYAREVA, O.F.; FEDYAYEVA, N.V.; OSTROVSKAYA, M.F.; prinimali uchastiye:  
PROSKURYAKOVA, A.Ye.; KRYUKOVA, P.A.; ASTAKHINA, L.G.

Spectral analysis of iron oxide by the vaporization method.  
Zav.lab. 27 no.7:842-844 '61. (MIRA 14:7)  
(Iron oxide--Spectra)



DEGTYAREVA, O.F.; FEDYAYEVA, N.V.; OSTROVSKAYA, M.F.; ASTAKHINA, L.G.;  
prinimali uchastiye: KRYUKOVA, P.A., PROSKURYAKOVA, A.Ye.

Determination of impurities in copper oxide by ~~the~~ spectral  
method. Zav.lab. 27 nq, 7:844-845 '61. (MIRA 14:7)  
(Copper oxide--Spectra)

NEGINA, V.R.; DEGTYAREVA, O.F.; FEDYAYEVA, N.V.; ASTAKHINA, L.G.;  
KRASHENNIKOVA, Ye.P.

Determination of impurities in polymers by the spectral  
method. Zav.lab. 28 no.4:444-445 '62. (MIRA 15:5)  
(Polymers--Spectra)

DEGTYAREVA, O.F.; SINITSYNA, L.G.; PROSKURYAKOVA, A.Ye.

Spectral determination of impurities in magnesium of high purity.  
Zhur.anal.khim. 17 no.8:926-930 N '62. (MIRA 15:12)  
(Magnesium—Analysis) (Chemical elements—Spectra)

S/075/63/018/002/007/009  
E195/E436

AUTHORS: Degtyareva, O.F., Ostrovskaya, M.F.

TITLE: Spectrographic analysis of high-purity tungsten trioxide by an evaporation method

PERIODICAL: Zhurnal analiticheskoy khimii, v.18, no.2, 1963, 245-249

TEXT: A method has been developed for the quantitative spectrographic determination of B, P, Zn, Cd, Sb, As, Al, Co, Si, Mn, Pb, Cr, Bi, Fe, Ti, Be, Sn, Cu, Ag, Ni, Ca, In, Sr, Ba, Na, Li, K in  $WO_3$ . The evaporation method previously used for the analysis of easily volatile metals could not be used for difficultly volatile metals because of their instability during evaporation. On investigating the evaporation process of the mixtures with  $WO_3$ , it was found that K, Na, Li, Sb, Sn, Bi, Ag, In, Cd, Zn and others volatilized mainly at  $1700^\circ C$ . The vaporization maximum of Be, Ba, Ca, Al, Sr, Cr, Ni, Fe, Mn, Si and others was in the range  $2100$  to  $2300^\circ C$ , after which the vaporization intensity decreased until  $2600^\circ C$ , when it started increasing again.  $2300^\circ C$  was chosen for the optimum determination of all the 28 elements. Stability of evaporation of all the elements was

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Spectrographic analysis ...

S/075/63/018/002/007/009  
E195/E436

achieved by uniform heating of the sample; the carbon vessels were fastened between the graphite brushes of the evaporator placed at an angle of 10 to 12°. The receivers containing the condensate were burned in the AC arc and the spectrum registered simultaneously on two spectrographs, ИСП-22 (ISP-22) - 0.15 mm aperture, and ИСП-51 (ISP-51) - 0.02 mm aperture. The sensitivity of the method was  $3 \times 10^{-3}$  to  $5 \times 10^{-7}\%$ . The mean square relative error of determination was 6 to 15%. There are 4 figures and 2 tables.

SUBMITTED: April 7, 1962

Card 2/2

L 16603-63

EWP(q)/EWT(m)/BDS AIFTC/ASD JD

S/075/63/018/004/012/015

AUTHOR: Degtyareva, O. F., Sinitsyna, L. G. and Proskuryakova, A. Ye.

TITLE: The spectral analysis of high-purity aluminum

PERIODICAL: Zhurnal analiticheskoy khimii, v. 18, no. 4, April 1963, 510-513

TEXT: The authors suggest a method for the direct simultaneous determination of 34 elements (B, F, Zn, Cd, Sb, Be, As, Co, W, Si, Mn, Fe, Mg, Pb, Ga, Ni, Bi, V, Mo, Sn, Ti, Cu, In, Ag, Pt, Pd, Cr, Ba, Tl, Na, K, Li, Rb) in aluminum oxide by means of fractional distillation from carbon electrodes into a DC arc at 7-12 amp. The spectra are recorded on ISP-22 and ISP-51 spectrographs. The sensitivity of the method is  $3 \cdot 10^{-5}$  —  $3 \cdot 10^{-2}\%$ . The reproducibility is 10 - 20%.

They also study the effect of the density of the aluminum oxide powder on mixing during the preparation of standards. There are 3 figures and 3 tables.

SUBMITTED: June 16, 1962  
Card 1/1

L 10525-65 EWT(m)/EPF(c)/EWG(v)/EPI/EMP(j)/T/EPA(bu)=2 Pc=4/Pc=5/Pr=4/  
ACCESSION NR: AP4039955 Ps-4 DJ/RM 3/0191/64/000/006/0064/0067

AUTHOR: Degtyareva, O. F.; Zenskov, P. I.; Yakushina, Ye. N.; Kharchenko, Ye. N.; Anishechenko, V. V.

TITLE: Antifriction properties of some plastic

SOURCE: Plasticheskiye massy\*, no. 6, 1964, 64-67

TOPIC TAGS: friction resistance, friction coefficient, wear resistance, antifriction property, capron, capron graphite composition, textolite, phenoplast, loading effect

ABSTRACT: The antifriction properties of capron, capron +3-5% graphite, textolite, and phenoplast were evaluated to determine their suitability for the production of articles operating under friction. The effects of load, rate of slip, type of lubricant, and hardness of shaft were studied on bushings of these materials used with steel or cast iron shafts, and on bushings of bronze, babbit and cast iron with steel shafts. Babbitt bushings had the lowest coefficient of friction; of the plastics tested, capron had the best antifriction properties. On loading, the coefficient of friction increased at first, then decreased and

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L 10525-65

ACCESSION NR: AP4039955

leveled off; at 20,000-25,000 revolutions the friction coefficient amounted to 60-70% of the original value. There was little wear on the shaft. Studies at 10-60 kg/cm<sup>2</sup> showed the coefficient of friction for capron was least at 30-40 kg/cm<sup>2</sup> loading. Its coefficient of friction decreased by about 1/2 on increasing the rate of slip from 0.5-1.5 m/sec. The harder the shaft the less the coefficient of friction and wear on the capron bushing. Capron with 3-5% graphite showed the least wear of all the materials tested. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: NT

NO REF SOV: 000

OTHER: 000

Card 2/2



L 55082-65 EWT(m)/EPT(n)-2/EWP(t)/EWP(b) Pa-1 IJP(c) JD/WH/IG  
 ACCESSION NR: AP5013501 UR/0075/65/000/005/0603/0607  
 543.70

AUTHOR: Degtyareva, O. F.; Sinitsyna, L. G.

TITLE: Spectral analysis of high purity zirconium

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 5, 1965, 603-607

TOPIC TAGS: zirconium, spectrum analysis, spectrography

ABSTRACT: A method was developed for spectrographic determination of impurities in zirconium based on the fractional distillation of impurities into an AC arc. A special design electrode, shown in fig. 1 of the Enclosure, facilitates thermal emission in the first few seconds of arcing, thus reducing the resistance in the gap between electrodes. Under these conditions a spontaneous current jump from 6.5 to 10 amperes occurs at the same time regardless of the sample composition. Silver chloride was used as a carrier. The weak spectrum of the principal substance and the low background enables simultaneous determination of 36 elements: Na, K, Li, Ca, Ba, Mg, Be, Co, In, Tl, Ga, V, Sr, Rb, La, Ge, Cu, Si, Al, Zn, Au, Pd, Cd, Ni, Sn, Mn, Sb, Fe, Cr, Bi, As, Pb, P, Mo, Ti, and W. The sensitivity ranges from

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L-55082-65

ACCESSION NR: AP5013501

$1 \cdot 10^{-6}$  to  $1.5 \cdot 10^{-2}\%$  and the relative standard deviation of a single determination is 10-20%. Zirconium metal is converted to  $ZrO_2$  by dissolution in  $H_2SO_4$  and calcination of the sulfate. Experiments with synthetic salt mixtures showed that there are no losses of the impurities being determined. The method is applicable to the analysis of various zirconium compounds after conversion to zirconium dioxide. Ye. A. Krylova participated in the development of this method. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 22Jan64

NO REF SOV: 012

ENCL: 01

SUB CODE: GC

OTHER: 005

Card 2/3

L-55082-65  
ACCESSION NR: AP5013501

ENCLOSURE: 01

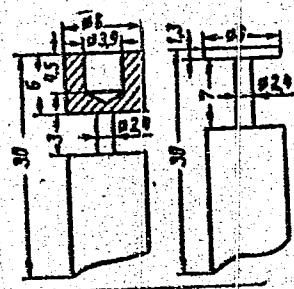


Fig. 1. Carbon electrode for zirconium analysis.

Card 3/3

L 63792-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5018757

UR/0075/65/020/007/0814/0821

543.42

AUTHOR: Degtyareva, O. F., Ostrovskaya, M. F.

TITLE: Spectrographic analysis of high-purity lead

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 7, 1965, 814-821

TOPIC TAGS: lead, spectrographic analysis, spectrochemical analysis, lead oxide, lead compound

ABSTRACT: A spectrochemical method was developed for simultaneously determining 34 elements (Zn, Cd, Sb, Be, As, Co, B, Si, P, Mn, Pt, Au, Fe, Mg, U, Ga, Ni, Bi, Al, Mo, Sn, Ca, Pd, In, Cu, Ag, La, Sr, Cr, Ba, Tl, Na, K, Pb) in metallic lead, its oxides and other lead compounds. The sensitivity is  $5 \times 10^{-7} - 1 \times 10^{-3}\%$ . An 80 to 100-fold concentration of the impurities after dissolving the sample in nitric acid is achieved by precipitating most of the lead in the form of  $PbCl_2$  by excess hydrochloric acid. The spectrographic analysis (using ISP-22 and ESP-51 spectrographs) was carried out on a solution of impurities separated from the lead precipitate. The minimum amount of the sample weighs 0.05-0.1 g. For the analysis, the solution is deposited on the tips of carbon electrodes coated with a polystyrene film, dried, and the spectra are excited in an

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L 63792-65

ACCESSION NR: AP5018757

alternating-current arc. The effect of composition of the samples on the line intensities of the impurities was studied. Vaporization curves of the impurities were obtained, and optimum conditions for the spectrographic analysis were determined. With certain modifications, the method may be applied to the determination of trace impurities in Na, Ba, Tl, and some other metals whose chlorides are poorly soluble in excess HCl. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 03Mar64

ENCL: 00

SUB CODE: IC, GC

NO REF SOV: 014

OTHER: 010

*llc*  
Card 2/2

DEGTYAREVA, O.F.; SINITSYNA, L.G.

Spectral analysis of high-purity zirconium. Zhur.anal.khim.  
20 no.5:603-607 '65. (MIRA 18:12)

1. Submitted January 22, 1964.

L 07438-67 EWT(m)/EMP(t)/ETI IJP(c) JD  
 ACC NR: AP6029220 (A, N) SOURCE CODE: UR/0145/66/000/004/0059/0063  
 AUTHOR: Zemskov, P. I. (Docent); Yakushina, Ye. N. (Engineer); Kharchenko, Ye. N. (Engineer); Khavina, R. B. (Engineer); Degtyareva, O. F. (Engineer)  
 ORG: None  
 TITLE: Improving the durability of chrome-plated piston rings  
 SOURCE: IVUZ. Mashinostroyeniye, no. 4, 1966, 59-63  
 TOPIC TAGS: engine piston, engine cylinder, carburization, chromium plating  
 ABSTRACT: Methods are proposed for increasing the wear resistance of the upper piston rings in tractor engines by carburizing the chrome-plated surface. The surfaces of the rings and cylinder were knurled before chrome plating. The knurl depressions were tetrahedral pyramids with a base of 0.5x0.5 mm located 2 mm apart with a depth of 0.18-0.25 mm. After chrome plating, the rings were chemically heat treated in a solid carburizer of the following composition: carbon--50%, Na<sub>2</sub>CO<sub>3</sub>--20%, Fe (filings)--30%. The heat treatment was continued for 5 hours at 950°C. X-ray structural analysis showed a gray layer of chromium carbide on the metal surface. This layer was 60-80 μ thick and was not etched by a 3-4% solution of HNO<sub>3</sub> or a 15-20% solution of HCl. The carbide layer is heat- and acid-resistant with a hardness of 1400-1600 kg/cm<sup>2</sup>. It was found that carburization increases the service life of chrome-plated piston rings by a factor of 1.3-2.2. The article was presented for publication by A. I. Pogorelov, Lecturer at Kharkov Municipal Engineering Institute. Orig. art. has: 3 figures. 1 table.  
 SUB CODE: 10, 13/ SUBM DATE: 18Jun64/ ORIG REF: 002  
 Cbrd 1/1 UDC: 62-47/-242

FOKAREV, Yu.N. (Leningrad, ul. Skorokhodova, d.32/12, kv.46); DEGTYAREVA,  
E.Ya.; PERLEY, L.I.

Effect of artificial blood circulation on the regular elements of the  
blood in experiment and in the clinic. Grud. khir. 6 no.2:44-47 Mr-Ap  
'64. (MIRA 18:4)

1. Gosptal'naya khirurgicheskaya klinika (zav. - chlen-korrespondent  
AMN SSSR prof. F.G.Uglov) I Leningradskogo meditsinskogo instituta  
imeni Pavlova.



ACC NR: AF6036113

SOURCE CODE: UR/0365/66/002/006/0686/0691

AUTHOR: Shalyafirner, A. M.; Degtyareva, R. A.; Pimenov, A. F.; Alysheva, Ye. I.; Yerakov, V. I.; Lifanov, V. F.; Anzin, G. N.

ORG: Moscow Institute for Steels and Alloys (Moskovskiy institut stali i splavov); Central Research Institute for Ferrous Metals (Tsentral'nyy nauchno-issledovatel'skiy institut chernykh metallov); Novolipetskiy Metallurgical Plant (Novolipetskiy metallurgicheskiy zavod)

TITLE: Internal oxidation of steel with 3% silicon

SOURCE: Zashchita metallov, v. 2, no. 6, 1966, 686-691

TOPIC TAGS: metal oxidation, silicon steel, hot rolling

ABSTRACT: The article reports a study of the oxidation and decarbonization of steel with 3% silicon and 0.05% carbon in the process of hot rolling in an industrial unit, and of decarbonizing annealing (in the presence of scale) in industrial electric furnaces. Steel strips were hot rolled to a thickness of 2.5 mm. In rolling, the initial oxidation temperature was maintained at  $940 \pm 10^{\circ}$ . The total length of the discharge table was 36 meters; in the last 30 meters the strip was cooled rapidly with water and was in an atmosphere of steam. After this, the strip was coiled and the air supply was cut sharply. The average cooling rate of the strip on the table, under

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UDC: 620.193.5

ACC NR: AP6036113

different rolling conditions, varied only slightly and was from 19-23 degrees/sec. The total oxidation time and the temperature of the strip before coiling were varied by changing the rolling rate. The temperatures of the strip before water cooling and before coiling were measured with an optical pyrometer and were recorded automatically. The coils were cooled in air over a period of 24 hours. Data on the values of the two abovementioned temperatures and on the time of the oxidation process are presented in a table. Based on the experimental data, a table shows the effect of hot rolling conditions on the formation of scale and on the rate of etching after annealing. In the production of steel, it is necessary to take certain measures which limit the process of internal oxidation: 1) the exit temperature of the strip should be lowered to 900° and the temperature of coiling up to 590-600°, because of the effect of the increase of the cooling rate under the influence of the blowing system; 2) the oxidation time of the metal on the discharge table should be shortened by increasing the rolling rate; 3) the heating rate and the temperature in decarbonization annealing should be increased; this leads to more favorable conditions for the oxidation of carbon, compared to the oxidation of silicon. Orig. art. has: 4 figures and 3 tables.

SUB CODE: 11/ SUBM DATE: 28Dec65/ ORIG REF: 007/ OTH REF: 004

Card 2/2

DEGTYAREVA, R. D., (Chief Veterinary Surgeon, Dubossarskii Raion,  
Moldavia SSR)

Veterinary and prophylactic measures in poultry breeding.

Veterinariya vol. 38, no. 9, September 1961 pp 17.

DEGTYAREVA, R.D.

Veterinary prophylactic measures in raising poultry.

Veterinariia 38 no.9:17-18 S '61. (MIRA 16:8)

1. Glavnyy veterinarnyy vrach Dubossarskogo rayona,  
Moldavskoy SSR.

DEGTYAREVA

USSR / General and Specialized Zoology - Insects

0-7

Abs Jour : Ref Zhur - Biol., No 6, March 1957, No 23245

Author : Degtyareva, Sanina

Inst : Not Given

Title : New Chloro-organic Preparation to Control Beet Weevils.

Orig Pub : Kolgospnik Ukraini, 1956, No 3, 16

Abstract : No abstract

Card : 1/1

GORSHTEYN, M.G.; DEGTYAREVA, S.A.; VINOKUROVA, M.A.

Filtering of a molten sulfur using a filter aid. Khim. prom.  
40 no.11:845-849 N '64 (MIRA 18:2)

DEGTYAREVA, S.I.; LAVRISHCHEVA, G.I.

Effect of suture material on the regeneration of tendons;  
experimental study. Ortop., travm. i protez. 26 no.1:52-56  
Ja '65. (MIRA 18:5)

1. Iz TSentral'nogo instituta travmatologii i ortopedii (dir. -  
chlen-korrespondent AMN SSSR prof. M.N. Volkov). Adres avtorov:  
Moskva A-299, ul. Priorova, d.2. TSentral'nyy institut travma-  
tologii i ortopedii.

DEGTYAREVA, S.I.

Result of using a removable wire suture in restoration of the integrity of the flexor tendons of the hand. Khirurgiia 35 no.7:99-103 J1 '59.

(MIRA 12:12)

1. Iz Tsentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Priorov) Ministerstva zdравookhraneniya SSSR.

(HAND, muscles & tendons)



DEGTYAREVA, S.I.

Reconstruction of the sliding apparatus of the digital flexor  
tendons in primary tendinosuture. Ortop. travm. i protez. 21  
no. 10:20-24 '60. (MIRA 14:1)  
(FINGERS--SURGERY) (TENDONS--SURGERY)

DEGTYAREVA, S.I.

Primary suture of the flexor tendons of the hand in the region  
of the tendon sheaths. Khirurgiia 36 no.8:103-108 Ag '60.

(MIRA 13:11)

1. Iz TSentral'nogo instituta travmatologii i ortopedii (dir. -  
deystvitel'nyy cheln AMN SSSR prof. N.N. Priorov) Ministerstva  
zdravookhraneniya SSSR.

(HAND-SURGERY)

DEGTYAREVA, S. I., Cand. Med.Sci., -- (diss) "Primary suture of the tendons of the wrist and of the fingers," Moscow, 1961, 16 pp (Central Institute for the Advanced Training of Physicians), 250 copies (KL-Supp 9-61, 190)

DEGTYAREVA, S.I.; LAVRISHCHEVA, G.I., kand. med. nauk

Auto- and homoplasty of tendons; experimental study. Ortop.,  
travm. i protez. no.9:35-39 '62.

(MIRA 17:11)

1. Iz otdeleniya ortopedii (zav. - doktor med. nauk M.D. Mikhel'man)  
i iz patologoanatomicheskogo otdeleniya (zav. - prof. T.P. Vino-  
gradova) Tsentral'nogo instituta travmatologii i ortopedii (dir. -  
deystvitel'nyy chlen AMN SSSR prof. N.N. Priorov [deceased]).

DEGTYAREVA, S.M.; ZASUKHIN, D.N.

Cultivation of the causative agent of cutaneous leishmaniasis of  
the desert type in tissue culture. Med. paraz. i paraz.bol. 28  
no.6:706-710 N-D '59. (MIRA 13:12)  
(DELHI BOIL) (TISSUE CULTURES)

DEGTYAREVA, S. M. and ZASUKHIN, D. N.

"The Cultivation of the Desert Type of the Cutaneous Leishmaniasis  
Virus on Tissue Cultures."

Tenth Conference on Parasitological Problems and Diseases with Natural  
Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of  
Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Epidemiology and Microbiology of the USSR Academy of Medical  
Sciences, Moscow

SAVICH, K.V.; DEGTYAREVA, S.M.

Histochemical studies on brain proteins in experimental blastomagenesis in mice. Vop.neirokhir. 28 no.4:31-35 J1-Ag '64.  
(MIRA 18:3)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni Burdenko (dir. - prof. A.I. Arutyunov) AMN SSSR, Moskva.

DEGTYAREVA, S.M. (Moskva)

Cytological picture of tumors of the macroglial series. Arkh.pat.  
27 no.7:37-43 '65. (MIRA 18:8)

1. Institut morfologii cheloveka (direktor -- chlen-korrespondent  
AMN SSSR prof. A.P.Ardaya) AMN SSSR i Institut neyrokhirurgii  
imeni N.N.Burdenko (direktor -- korrespondent chlen AMN SSSR  
prof. B.G.Yegorov) AMN SSSR.



5(4)

AUTHORS:

Degtyareva, T. A., Mokrushin, S. G.

SOV/153-58-6-1/22

TITLE:

Formation of Ultra-thin Layers of the Disperse Phase on the Separating Plane Hydrosol - Organic Liquid (Obrazovaniye ul'tratonkikh sloyev dispersnoy fazy na poverkhnosti razdela gidrozol'-organicheskaya zhidkost'). I. Influence of the Character of the Non-aqueous Phase on the Film Formation Kinetics (Vliyaniye kharaktera nemodnoy fazy na kinetiku obrazovaniya plenok)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 6, pp 3-8 (USSR)

ABSTRACT:

The laminar systems belong to the unilaterally-disperse systems and take an intermediate position between the polydisperse systems and the macro-systems. Consequently, the laminar systems possess a great variety of properties. The films formed on the separating plane of two liquid phases are of great importance for the formation and stability of emulsions. Insofar as emulsions belong to systems with a highly developed interphase plane, and as this plane determines the properties and stabilities of the emulsions, the surface layers are closely linked with the problems of the emulsions. Various well-known

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Formation of Ultra-thin Layers of the Disperse Phase on the Separating Plane Hydrosol - Organic Liquid. SC7/53-58-6-1/22

I. Influence of the Character of the Non-aqueous Phase on the Film Formation Kinetics

organic stabilizers of the emulsions are recalled (Ref 3). A spontaneous film formation on the surfaces of colloidal solutions has been described by the 2nd author in respect of hydrosols of iron-(Ref 7) chromium- and aluminium hydroxides (Ref 4). He proposed the hypothesis (Ref 5) that this process constituted a consequence of the surface coagulation of the sol. This problem has been studied in great detail by Frumkin (Ref 6). On an earlier occasion, the 2nd author had studied the formation of films also on the surfaces of hydrosols of titanium and thorium hydroxides (Ref 8). On the replacement, by a new separating plane hydrosol - condensed organic phase, of the phase separating plane hydrosol - air, the colloidal particles are fixed more rigidly on the parting plane (Refs 9,10). Firstly, interphase tension affects the surface colloidal particle - liquid (Refs 9, 10). Secondly, the organic liquid can change the stability of the sol and favor its coagulation (Ref 11). In the paper under consideration the study of this phenomenon is continued. The authors studied the film formation

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Formation of Ultra-thin Layers of the Disperse Phase SOV/153-58-6-1/22  
on the Separating Plane Hydrosol - Organic Liquid.

I. Influence of the Character of the Non-aqueous Phase  
on the Film Formation Kinetics

on the phase separating plane hydrosol of nickel-hydroxide - organic liquid (benzene, benzine, toluene, o-xylene, chlorobenzene, or nitrobenzene). They arrived at the following results: 1) A film of colloidal nickel hydroxyl develops spontaneously on the surface of the colloidal solution, both on the border to air and on that to the non-aqueous condensed phase. Table 1 shows the thicknesses of films of different interference colors. 2) The film thickness increases in the course of time, until it reaches a constant value. This period of time varies with the separating planes: the attainment of this value takes longest on the border to air (more than 48 hours). If an organic liquid is used instead of air, the growth of the film is completed more quickly: after a contact duration of 16 hours on the border to a non-polar liquid, after a duration of 8 hours on that to a polar liquid (Figs 1, 2, Table 2). 3) Films developed on different separating planes possess different maximum thicknesses. This fact is connected with the different coagulating effects of the organic liquids.

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Formation of Ultra-thin Layers of the Disperse Phase SOV/153-58-6-1/22  
on the Separating Plane Hydrosol - Organic Liquid.

I. Influence of the Character of the Non-aqueous Phase  
on the Film Formation Kinetics

There are 2 figures, 2 tables, and 19 references, 10 of which  
are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova,  
Kafedra fizicheskoy i kolloidnoy khimii (Ural Polytechnical  
Institute imeni S. M. Kirov, Chair of Physical- and Colloid  
Chemistry)

SUBMITTED: December 2, 1957

Card 4/4

AUTHORS: Degtyareva, T.A.; Mokrushin, S.G. 69-58-2 -5/23

TITLE: The Formation of Ultra-Thin Disperse Phase Layers at a Hydrosol-Organic Liquid Interface (Obrazovaniye ul'tratonkikh sloyev dispersnoy fazy na poverkhnosti razdela gidrosol'-organicheskaya zhidkost')

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 2, pp 159-162 (USSR)

ABSTRACT: The spontaneous formation of thin films on the surface of colloidal solutions is described [Ref 1]. If the interface hydrosol-air is replaced by the interface hydrosol-condensed organic phase, the fastening of the colloidal particles on the interface is tighter. This is due to the interface attraction on the surface colloidal particle-liquid [Ref 6]. A kinetic study of the formation of films on the interface nickel hydroxide hydrosol-organic liquid in relation to the sol concentration and the nature of the non-aqueous phase is made in the article. The colloidal particles of the nickel hydroxide have the form of hexagonal plates with a thickness of several molecular layers and a diameter of 280-1,000 angstrom. The particles are positively charged. Experiments show that the ability for spontaneous formation of thin films is mainly present in positive-

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69-58-2 -5/23

The Formation of Ultra-Thin Disperse Phase Layers at a Hydrosol-Organic Liquid Interface

ly charged sols. Nickel hydroxide hydrosol, with a concentration of 0.158 g Ni per 1 liter, was used, but for the non-aqueous phase, benzene, o-xylene, toluol, chlorobenzene, and nitrobenzene was used. The thickness of the multi-layer film was determined by interferential color observed during repeated submerging in chrome-plate sol. The results of the kinetic study are given in figure 1. Not only a faster formation of the film is caused by the non-polar condensed phase, but also the formation of thicker films than on the interface with air. An increase of the polarity of the non-aqueous phase causes a decrease in the thickness of the film (table 2). The influence of the sol dilution on the formation of the films is shown in figure 2. The thickness of the films is in all cases nearly the same.

There are 2 graphs, 2 tables, and 13 references, 6 of which are Soviet, 4 German, 2 English, and 1 American.

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69-58-2 -5/23

The Formation of Ultra-Thin Disperse Phase Layers at a Hydrosol-Organic Liquid Interface

ASSOCIATION: Ural'skiy politekhnicheskii institut imeni S.M. Kirova,  
Sverdlovsk (Ural Polytechnical Institute imeni S.M. Kirov,  
Sverdlovsk)

SUBMITTED: December 4, 1956

1. Chemical compounds--Theory    2. Films--Formation  
3. Colloids--Applications

Card 3/3

5(4)

**AUTHORS:**

Degtyareva, T. A., Mokrushin, S. G.

SOV/153-2-1-6/25

**TITLE:**

Formation of Ultramicroscopically Thin Layers of the Disperse Phase on the Hydrosol - Organic Liquid Interface (Obrazovaniye ultratonskikh sloev dispersnoy fazy na poverkhnosti razdela gidrozol' - organicheskaya zhidkost")  
II. Effect of Electrolytes on the Kinetics of Film Formation (II. Vliyaniye elektrolitov na kinetiku obrazovaniya plenok)

**PERIODICAL:**

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 1, pp 30-33 (USSR)

**ABSTRACT:**

The authors arrived at the conclusion that the increasing thickness of films in the course of time results from the coagulation of colloidal particles in the surface layer. The different (maximum) thickness of the films formed at the separating surface toward various organic liquids is determined by the different capability of coagulating of the latter. Since the coagulation of colloidal particles is due to partial or total discharge of the particles, the intensity of coagulation obviously depends on the concentration of the ions promoting coagulation. Since nickel-hydroxide particles are positively charged, their coagulation is caused by anions. For

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Formation of Ultramicroscopically Thin Layers of the Disperse SOV/153-2-1-6/25  
Phase on the Hydrosol-Organic Liquid Interface

## II. Effect of Electrolytes on the Kinetics of Film Formation

purpose of investigating the problem mentioned in the subtitle the authors used electrolytes with anions which exhibit different adsorptive power in the separating layer: KCl, KBr, KJ,  $K_3Fe(CN)_6$ , and  $K_4Fe(CN)_6$  (Ref 1). The procedure of these experiments is described in the experimental part. The results are listed in figures 1 - 4 which indicate that an electrolyte addition to the sol results in the formation of thicker films, as compared with films without an electrolytic addition at the same separating surface. Films of colloidal nickel hydroxide at the separating surface hydrosol - benzene without the addition of electrolytes attain a maximum thickness of 99 Å. In the presence of KCl, KBr, and KJ, it is equal to 103 Å, 117 Å, and 127 Å, respectively. The authors determined the maximum thickness of the film by the equation  $\frac{t}{\delta t} = \frac{1}{\delta \infty} t + \frac{1}{\delta \infty k}$  (1) by the graphical method. The growth rate of the film thickness is denoted rate constant k. Its value

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Formation of Ultramicroscopically Thin Layers of the SOV/153-2-1-6/25  
Disperse Phase on the Hydrosol-Organic Liquid Interface  
II. Effect of Electrolytes on the Kinetics of Film Formation

was graphically determined according to figures 3 and 4 (see Table on p 31, not numbered). The authors believe that equivalent electrolytic additions to the sol render the concentration of the anions in the separating layer different: maximum concentration in the case of J-anions, minimum concentration in the case of Cl-anions. The colloidal particles in the separating layer therefore coagulate at different velocities, as may be concluded from the value of the constant  $k$  determined by the authors. Owing to the difference in the coagulating effect of  $\text{Cl}^-$ ,  $\text{Br}^-$ , and  $\text{J}^-$ -anions also films of different thickness are produced. The action of the afore-mentioned iron cyanides on the kinetics of the film is determined by the same factors as in the case of halogen salts. If no coagulation of the colloidal particles in the separating surface occurs, only a thin film is produced. Its thickness remains constant and is equal to one of the dimensions of the primary colloidal particles. The authors applied a monolayer of oleic and erucic acid to the sol surface. The relevant results are contained in figure 5. The film thickness remains constant in the course of time. The film structure was illustrated in a scheme.

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Formation of Ultramicroscopically Thin Layers of the  
Disperse Phase on the Hydrosol-Organic Liquid Interface  
II. Effect of Electrolytes on the Kinetics of Film Formation

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Discharge occurs only at the surface of the colloidal particles where the acid molecules are adsorbed. Since the discharge is conserved at the lower side of the particles, no second layer of colloidal nickel hydroxide is formed, and no increase in the film thickness is brought about by coagulation. The thickness of the resultant films is to be considered a summary quantity which comprises the thickness of the small plates of the afore-mentioned hydroxide and of the thickness of the acid molecules. This is equal to the length of the hydrocarbon chain. If the length of the oleate molecules amounts to 22 Å, one colloidal particle is 21 Å long, which corresponds to the thickness of the colloidal particle of nickel hydroxide (Ref 6). There are 5 figures, 1 table, and 6 references, 5 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova; Kafedra fizicheskoy i kolloidnoy khimii (Ural Polytechnic Institute imeni S. M. Kirov; Chair of Physical- and Colloid Chemistry)

SUBMITTED: December 2, 1957  
Card 4/4

5 (4)

AUTHORS:

Degtyareva, T. A., Mokrushin, S. G. SOV/153-2-2-8/31

TITLE:

Formation of Ultrathin Layers of the Disperse Phase on the Parting Plane on Hydrosol Organic Liquid (Obrazovaniye ul'tratonkikh sloyev disperanoy fazy na poverkhnosti razdela gidrozol'-organicheskaya shidkost'). III. Structural Changes in Ultrathin Layers (III. O strukturnykh izmeneniyakh v ul'tratonkikh sloyakh)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 2, pp 190 - 195 (USSR)

ABSTRACT:

Defining the film thickness of colloidal nickel hydroxide (method Langmuir-Blodgett) the authors noticed a change of the surface occupied by the film during that time. In the present article they investigate the influence of several factors on this change of the mentioned film which developed during different lengths of time. To investigate the influence of the nature of the condensed anhydrous phase, they chose: benzene, o-xylene, chlorobenzene and nitrobenzene. The brine was diluted to one fourth and one eighth. In order to investigate the influence of surface active agents on the change of film surface,

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